


**PATENT COOPERATION TREATY**  
**PCT**  
**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**  
(Chapter II of the Patent Cooperation Treaty)  
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 650375C:MOB	<b>FOR FURTHER ACTION</b>	See Form PCT/IPEA/416
International application No. <b>PCT/AU2004/001368</b>	International filing date (day/month/year) 7 October 2004	Priority date (day/month/year) 7 October 2003
International Patent Classification (IPC) or national classification and IPC  Int. Cl. <b>C07D 207/34</b> (2006.01) <span style="float: right;">(continued in supplemental box)</span>		
Applicant <b>UNIVERSITY OF WESTERN SYDNEY et al.</b>		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36. 2. This REPORT consists of a total of 5 sheets, including this cover sheet. 3. This report is also accompanied by ANNEXES, comprising: a. <input checked="" type="checkbox"/> (sent to the applicant and to the International Bureau) a total of 32 sheets, as follows: <div style="margin-left: 20px;"> <input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).  <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.  b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or table related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions). </div> 4. This report contains indications relating to the following items: <div style="margin-left: 20px;"> <input checked="" type="checkbox"/> Box No. I Basis of the report  <input type="checkbox"/> Box No. II Priority  <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  <input type="checkbox"/> Box No. IV Lack of unity of invention  <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement  <input type="checkbox"/> Box No. VI Certain documents cited  <input type="checkbox"/> Box No. VII Certain defects in the international application  <input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application </div>	
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Date of submission of the demand 21 March 2005	Date of completion of this report 10 January 2006 10 January 2006 10 January 2006 11 January 2006
Name and mailing address of the IPEA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaaustralia.gov.au Facsimile No. (02) 6285 3929	Authorized Officer   <b>O.L. CHAI</b> Telephone No. (02) 6283 2482

**Box No. I**      **Basis of the report**

## 1. With regard to the language, this report is based on:

- ☒ The international application in the language in which it was filed
- ☐ A translation of the international application into \_\_\_\_\_, which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3(a) and 23.1 (b))
- ☐ publication of the international application (under Rule 12.4(a))
- ☐ international preliminary examination (Rules 55.2(a) and/or 55.3(a))

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):*

- ☐ the international application as originally filed/furnished
- ☒ the description:  
     pages 1-61 as originally filed/furnished  
     pages\* 62-65 received by this Authority on 20 July 2005 with the letter of 19 July 2005  
     pages\* received by this Authority on with the letter of
- ☒ the claims:  
     pages as originally filed/furnished  
     pages\* as amended (together with any statement) under Article 19  
     pages\* 66, 67, 69, 70, 72 received by this Authority on 20 July 2005 with the letter of 20 July 2005  
     pages\* 68, 71, 73, 74 received by this Authority on 23 December 2005 with the letter of 23 December 2005
- ☒ the drawings:  
     pages as originally filed/furnished  
     pages 1/19-19/19 received by this Authority on 14 December 2004 with the letter of 14 December 2004  
     pages\* received by this Authority on with the letter of

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to the sequence listing (*specify*):

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to the sequence listing (*specify*):

\* If item 4 applies, some or all of those sheets may be marked "superseded."

**Box No. V** Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

Novelty (N)	Claims 1-19	YES
	Claims	NO
Inventive step (IS)	Claims 1-19	YES
	Claims	NO
Industrial applicability (IA)	Claims 1-19	YES
	Claims	NO

**2. Citations and explanations (Rule 70.7)**

The following documents identified in the International Search Report have been considered for the purposes of this report:

- D1 WO 1998/049142
- D2 WO 2003/041128
- D3 US 4942227
- D4 WO 1999/062551
- D5 WO 2003/020877
- D6 Arzneimittel-Forschung (2003), 53(2), 107-113
- D7 Bioorganic & Medicinal Chemistry (2002), 10(10), 3313-3318
- D8 Nucleic Acids Research (2000), 28(24), 4856-4864
- D9 European Journal of Biochemistry (1999), 266(2), 392-402
- D10 Journal of the American Chemical Society (1999), 121(6), 1113-1120
- D11 Medicinal Chemistry Research (1996), 6(6), 365-371
- D12 Tetrahedron (1994), 50(42), 12065-84
- D13 Bioorganic & Medicinal Chemistry Letters (1993), 3(8), 1751-6
- D14 Journal of the American Chemical Society (1987), 109(24), 7564-6

As a result of the amendments, none of the cited documents discloses or fairly suggests the invention as claimed. Therefore, claims 1-19 are considered to meet the requirements of Article 33(2)-(3) PCT with regard to novelty and inventive step.

Claims 1-19 are considered to meet the requirements of Article 33(4) of the PCT with regards to industrial applicability.

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**Box No. VIII** Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

1. Claims 1-12 and 16-19 are not fully supported by the description. The scope as defined by the said claims extends far beyond what has been disclosed in the description. From a fair reading of the specification, there is only substantial support for a small number of compounds – there are only 4 examples of the compounds claimed. The claims should be drafted to clearly reflect what has been disclosed.
2. Claims 1 and 9 are not clear in scope.
  - (i) The variables  $M^1$ ,  $M^2$  and  $M^3$  are merely defined by results, it is not clear what metal coordination complex can be included.
  - (ii) The variables  $T^1$ ,  $T^2$  and  $T^3$  have not been defined clearly except that it is a linker group. It is not clear what can be included.
  - (iii) The term “sequence selective” does not seem to have a clear definition and it is not clear what pyrrole imidazole polyamides fall within the scope and what are excluded.
3. Claim 7 is not fully supported by the description. The definition of the linker groups includes many linkers that the specification does not have any support for.
4. Claim 17 is not clear. It is not clear what can be included in the terms “therapeutic agent”, “reporter group” and “a sequence”. These imprecise terms render the scope unclear.
5. Claim 19 is not clear. It does not define clearly what the method of diagnosis actually diagnoses.

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## Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: IPC Classification

Int. Cl.

*A61K 31/4164* (2006.01)

*A61P 31/18* (2006.01)

*C07D 233/90* (2006.01)

*A61K 31/40* (2006.01)

*A61P 35/00* (2006.01)

*A61P 31/12* (2006.01)

*C07D 209/56* (2006.01)

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